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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/025,811 | 12/26/2001 | Quoc-Luan Allen Tran | P110501 | 5989 |

22839 7590 11/01/2005

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EXAMINER

NGUYEN, VAN H

ART UNIT PAPER NUMBER

2194

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/025,811 | Applicant(s) TRAN ET AL. | |
| | Examiner VAN H. NGUYEN | Art Unit 2194 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the amendment filed on August 09th, 2005.
2. Claims 1-23 are currently presented in this application. Claims 1, 11, and 18 are independent claims.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. **Claims 11-16 and 18** are rejected under 35 U.S.C. 102(e) as being anticipated by **Pulsipher et al.** (Pub. No.:US 2003/0120708 A1).
5. **As to claim 18:**
 - a. Pulsipher teaches the invention as claimed including a system (*100; fig. 1*) for executing parallel jobs (*e.g., the jobs are caused to be executed in parallel; see the abstract and para. 0069*), each parallel job comprising multiple tasks, each task being executed in parallel (*e.g., the tasks included in each respective job are collectively executed in parallel; see the abstract*) by separate resources (*e.g., the tasks are executed in one or more servers; see the abstract*) to produce an exit

status for the task (*e.g., exits with a successful termination status; para. 0096*),
said system comprising:

- b. a resource manager (*e.g., a distributed resource management application 106; fig. 1 and para. 0114*) for receiving the jobs (*e.g., tasks 1-4 of a first job and tasks 110 of a second job are submitted to a distributed resource management application 106; para. 0114*) and selecting resources (*e.g., schedules and manages work to be run on the multiple processors of the server farm; para. 0033 and 0114 and 0119*) to execute the multiple tasks of the job;
- c. a task starter associated with each task (*e.g., task server 806; para. 0186*), each task starter commencing (*e.g., execute the task command; para. 0186*), on an associated resource (*e.g., a processor on a server farm 108; para. 0175*), the tasks sent from the resource manager (*e.g., distributed resource management application 106 submits jobs to server farm 108; fig. 1 and para. 0028 and 0187*), collecting a process identifier from the associated resource, and sending the process identifier of the task to the resource manager (*e.g., essentially requesting the application 106 find a processor on a server farm 108 on which to execute the task command... The command passed to the management application 106 requests submission of a task server 806... Each task server 806 consists of the same _exectasks command, along with a job ID; para. 0186*).

6. **As to claim 11:**

The rejection of claim 18 above is incorporated herein in full. Additionally, Pulsipher further teaches sending the process identifier to an external event unit (*fig.1 shows work*

control & management layer 104 associates with distributed resource management application 106 and receives information (i.e., the process identifier) from task server 806).

7. As to claim 12:

Pulsipher teaches prior to dispatching the task, generating a command instruction corresponding to each task said command instruction including the task starter (para.0090), and storing at least a portion of the command instruction in the resource manager (para.0092); sending the portion of the command instruction with the process identifier from each task starter to the external event unit (para.0186); correlating the command instructions stored in the resource manager with the process identifier and the portion of the command instruction (para.0187).

8. As to claim 13:

Pulsipher teaches the command instructions include instructions for the task starters to send the process identifiers of the tasks to a location associated with the resource manager (para.0182); and wherein the task starters send the process identifiers of the tasks to the location identified by the command instructions upon commencement of the execution of the task (para.0186).

9. As to claim 14:

Pulsipher teaches the command instructions include instructions for the task starters to send the exit status (para.0096) of the tasks to a location associated with the resource manager; and wherein each task starter sends the exit status of the task with the process

Art Unit: 2194

identifier or the portion of the command instruction, or both, to the location identified by the command instructions upon completion of the execution of the task (para.0098).

10. **As to claim 15:**

Pulsipher teaches prior to dispatching the task, storing an action to be performed upon receipt by the external event unit of the exit status of a task (para.0096), said action being associated with the command instruction; and upon receipt of the exit status of the task, identifying the action associated with the command instruction of the exit status of the task, and executing the action on the exit status of the task (e.g., completed, warning, or error; para.0098).

11. **As to claim 16:**

Pulsipher teaches the task starters collect from the resources information regarding resource usage of the task and the task starter sends the information regarding resource usage of the task with the process identifier to the resource manager (para.0186).

Claim Rejections - 35 USC § 103

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. **Claims 1-10, 17, and 19-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pulsipher et al.** in view of **Applicant Admitted Prior Art (APA)**.

14. **As to claim 1:**

- a. The rejection of claim 18 above is incorporated herein in full. Additionally, Pulsipher further teaches an external event unit, associated with the resource manager, for receiving the process identifier of the tasks from the associated task starter (*fig.8 shows work control & management layer 104 associates with distributed resource management application 106 and receives information (i.e., the process identifier) from task servers 806*).
- b. Pulsipher does not specifically teach the use of a job launcher unit.
- c. APA teaches the use of a job launcher unit (*e.g., vendor parallel job launcher 18, fig. 2*).
- d. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of APA with Pulsipher because APA's teachings would have provided the capability for allocating and dispatching tasks to resources and facilitating high-speed communication between resources.

15. **As to claim 2:**

Pulsipher teaches a coordinating unit (e.g., 102; fig. 1), associated with the resource manager, for inserting said task starters in a command instruction associated with the task, each command instruction corresponding to a task and at least a portion of the command instruction being stored in the resource manager (para.0030); and wherein the

task starters return the portion of the command instruction of the task with the process identifier (para.0186).

16. As to claim 3:

Pulsipher teaches the coordinating unit inserts in the command instruction location information for the task starters to send the process identifier (para.0186) and an exit status of the tasks (para.0096) to the resource manager.

17. As to claim 4:

Pulsipher teaches the location information comprises port and host information of the resource manager (para.0110).

18. As to claim 5:

Pulsipher teaches the command instructions comprise a host identifier for identifying a host containing the resource to execute the task, and, wherein the portion of the command instruction of the task includes the host identifier (para.0095).

19. As to claim 6:

Note the discussion of claim 1 above regarding the use of a job launcher unit.

20. As to claim 7:

Pulsipher teaches once a task has been completed on the associated resource, the task starter collects the exit status of the task from the associated resource (para.0096) and sends the exit status of the task to the resource manager together with the process identifier and host identifier (para.0098).

21. As to claim 8:

Pulsipher teaches the external event unit performs a commencement action upon receipt of the process identifier from a task starter (para.0186), said commencement action including mapping the process identifier with the portion of the command instruction stored in the resource manager, and storing the process identifier in the resource manager (para.0187).

22. As to claim 9:

Pulsipher teaches once a task has been completed on the associated resource, the task starter collects the exit status of the task from the associated resource (para.0096) and sends the exit status of the task to the resource manager together with the process identifier (para.0098); and wherein the external event unit performs a task exit action upon receipt of the task exit action having been predetermined by the coordinating unit (para.0098).

23. As to claim 10:

Pulsipher teaches the coordinating unit stores the commencement actions and completion actions in the resource manager prior to the task being dispatched, said actions being associated with said command instruction for the task (see fig. 2 and the associated text).

24. As to claim 23:

Pulsipher teaches once a task has been completed on an associated resource, the task starter collects resource usage information of the task from the resource and sends the resource usage information to the resource manager together with the process identifier (para.0186).

25. As to claim 17:

Art Unit: 2194

Pulsipher teaches the command instructions comprise a host identifier for identifying the host containing the resource to execute the task (para.0195). Note the discussion of claim1 above regarding the use of a job launcher unit.

26. **As to claim 19:**

Note the discussion of claim 1 above regarding the use of a job launcher unit.

27. **As to claim 20:**

Pulsipher teaches a coordinating unit (e.g., 102; fig. 1), associated with the resource manager, for inserting in a command instruction for each task the task starters associated with the task and each command instruction corresponding to a task (para.0030).

28. **As to claim 21:**

Pulsipher teaches an external event unit (e.g., 104; fig. 1), associated with the resource manager for receiving the process identifier and exit status (para. 0096) of the task from the task starter; wherein the external event unit performs a commencement action upon receipt of the process identifier from a task starter, and, a task exit action upon receipt of an exit status of the task; and wherein the task commencement action and task exit action are predetermined by the coordinating unit (para. 0098).

29. **As to claim 22:**

Pulsipher teaches the task starters send resource usage information to the resource managers at completion of the task (para. 0037).

Response to Arguments

30. Applicant's arguments filed on August 09th, 2005 have been fully considered but they are not persuasive.
31. In the remarks, Applicant argued in substance that (a) the Pulsipher does not teach collecting the process identifier; (b) the process identifier as defined by the present specification is completely different from the job ID as defined by the Pulsipher reference; and (c) the Pulsipher reference does not teach, suggest or disclose the advantages of the present invention. These advantages, for instance, include that the parallel application manager PAM 240 of the present application has the process identifier and can use the process identifier to control execution of each individual task 4 even though the parallel application manager PAM 240 did not start the task 4 on the resource 6. Moreover, if the task 4 being executed in the resource 6 was not being executed properly, the parallel application manager PAM would not receive a process identifier for a task 4 from the associated task starter 220, and the parallel application manager PAM of the present invention would be aware that a problem has arisen with the execution of the task 4, as further disclosed in the present disclose. The Pulsipher reference does not teach, suggest or disclose any of these advantages.
32. Examiner respectfully traverses Applicant's remarks.
33. As to point (a), Pulsipher's teaching "*when a the job server 804 encounters an executable task command...the command passed to the management application 106*

Art Unit: 2194

requests submission...along with a job ID" (see para. 0186) does read-on "*collecting the process identifier*" as recited in claim 18.

34. As to point (b), Applicant is requested to clarify how "the process identifier as defined by the present specification is completely different from the job ID as defined by the Pulsipher reference". Pulsipher does teach the use of ID for identifying a job, a task, or a process (see the ID discussion beginning at para. 0183).
35. As to point (c), Applicant is arguing the disclosure, not the claim limitations. Claimed subject matter, not the specification is the measure of the invention. Limitations in the specification cannot be read into the claims for the purpose of avoiding the prior art, *In re Self*, 213 USPQ 1,5 (CCPA 1982); *In re Priest*, 199 USPQ 11, 15 (CCPA 1978). The aforementioned claim elements are clearly subject to a broad interpretation, as detailed in the rejections maintained above. The Examiner has a *duty* and *responsibility* to the public and to Applicant to interpret the claims *as broadly as reasonably possible* during prosecution (see *In re Prater*, 56 CCPA 1381, 415F.2d 1393, 162 USPQ 541 (1969)).

Conclusion


36. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
37. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 2194

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

38. Any inquiry or a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM – 6:00PM. The examiner can also be reached on alternative Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor WILLIAM THOMSON can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:
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